

PRODUCT INFORMATION GUIDE **EPSON**

UPDATE

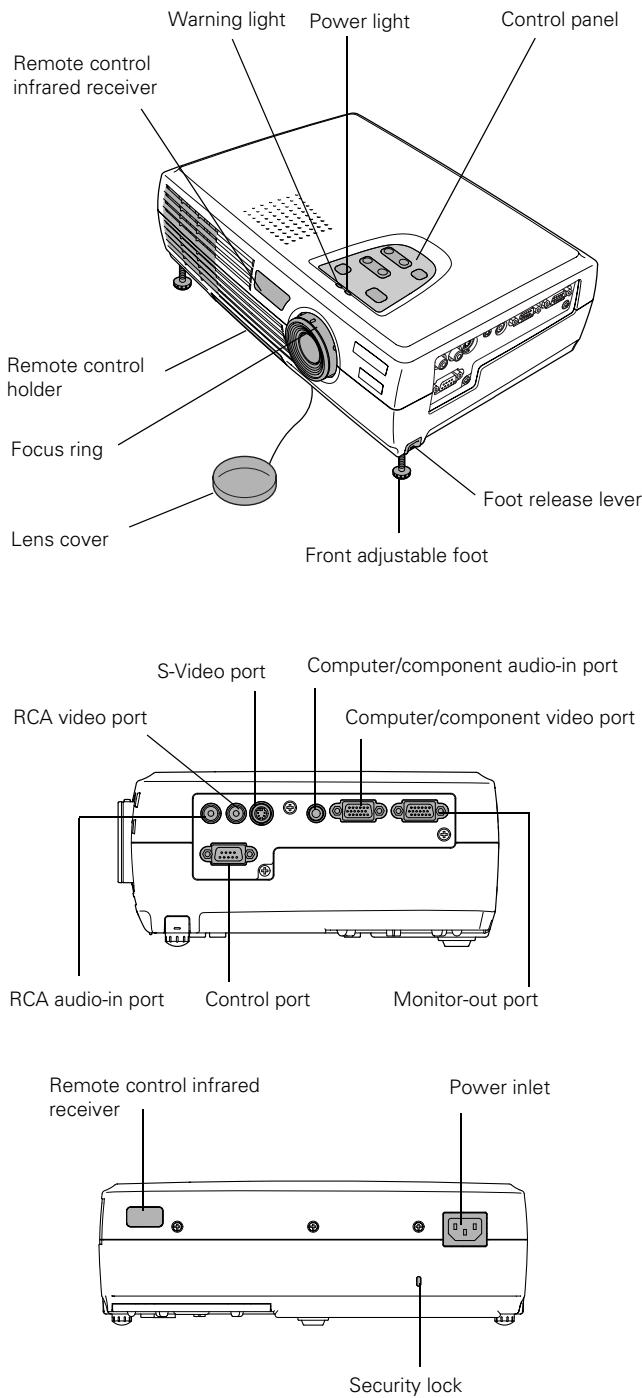
11/7/02

This package provides a new multimedia projector product section to be added to the *EPSON® Product Information Guide*. The table of contents of this section is listed below.

EPSON PowerLite® 52c

TABLE OF CONTENTS

Projector Specifications	EPSON PowerLite 52c Projector - 1
Projector Placement.....	EPSON PowerLite 52c Projector - 2
Starting Up the Projector.....	EPSON PowerLite 52c Projector - 3
Shutting Down the Projector.....	EPSON PowerLite 52c Projector - 5
Projector Status Lights.....	EPSON PowerLite 52c Projector - 6
Using the Remote Control	EPSON PowerLite 52c Projector - 7
Using the Projector's Buttons	EPSON PowerLite 52c Projector - 7
Cleaning the Lens	EPSON PowerLite 52c Projector - 8
Cleaning the Projector Case.....	EPSON PowerLite 52c Projector - 8
Cleaning and Replacing the Air Filter.....	EPSON PowerLite 52c Projector - 8
Replacing the Lamp.....	EPSON PowerLite 52c Projector - 8
Optional Accessories.....	EPSON PowerLite 52c Projector - 9
Related Documentation.....	EPSON PowerLite 52c Projector - 9



Projector Specifications

General

Type of display	Poly-silicon Thin Film Transistor (TFT) active matrix with Micro Lens Array (MLA)
Size of LCD panels	Diagonal: 0.5 inch (12.7 mm)
Lens	$f=1.5, f=16.6 \text{ mm}$
Resolution	800 \times 600 pixels (native format)
Color reproduction	Full color, 16.77 million colors
Brightness	1200 lumens (ANSI)
Contrast ratio	400:1
Image size	30 to 300 inches
Projection distance	2.9 to 37 feet (0.9 to 11.3 meters)
Projection methods	Front, rear, upside-down (ceiling mount)
Internal sound system	1 W monaural
Optical aspect ratio	4:3 (horizontal:vertical)
Zoom ratio	1:1.2
Noise level	35 dB
Keystone correction angle	$\pm 15^\circ$ (maximum)

Projection Lamp

Type	UHE (Ultra High Efficiency)
Power consumption	130 W
Lamp life	About 1500 hours
Part number	V13H010L1D

Remote Control

Range	20 feet (6 meters)
Batteries	CR2025 lithium

Dimensions

Height	3.7 inches (93 mm)*
Width	12.2 inches (309 mm)*
Depth	8.6 inches (219 mm)*
Weight	6.4 lb (2.9 kg)

*excluding lens and feet

Electrical

Rated frequency	50 to 60 Hz
Power supply	100 to 120 VAC, 2.2 A 200 to 240 VAC, 1.0 A

Environmental

Temperature Operating: 41 to 95 °F (5 to 35 °C)
 Storage: 14 to 140 °F (-10 to 60 °C)

Safety

United States FCC Part 15B Class B
 UL1950 Rev. 3

Canada DOC ICES003 Class B
 CSA C22.2 No. 950 Rev. 3

CE Marking Directive 89/336/EEC, 92/31/EEC
 EN 60950

Compatible Video Formats

The projector supports NTSC, PAL, and SECAM international video standards, as well as the monitor display formats listed below.

To project images output from a computer, the computer's video card must be set at a refresh rate (vertical frequency) that's compatible with the projector; see the following table for compatible formats. As noted below, some images are automatically resized to display in one of the projector's "native" formats (such as SVGA). In addition, the frequencies of some computers may not allow images to display correctly; see your computer's documentation for details.

Mode	Refresh Rate (Hz)	Resolution
VGA/EGA	70	640 x 350*
VGA-60	60	640 x 480*
VGA-72	72	640 x 480*
VGA-75	75	640 x 480*
VGA-85	85	640 x 480*
SVGA-56	56	800 x 600
SVGA-60	60	800 x 600
SVGA-72	72	800 x 600
SVGA-75	75	800 x 600
SVGA-85	85	800 x 600
XGA-43i	43	1024 x 768*
XGA-60	60	1024 x 768*
XGA-70	70	1024 x 768*
XGA-75	75	1024 x 768*
XGA-85	85	1024 x 768*
MAC13	67	640 x 480*
MAC16	75	832 x 624*
MAC19-60	59	1024 x 768*
MAC19	75	1024 x 768*
MAC21	75	1152 x 870*
HDTV480i	60	640 x 480*
HDTV480p	60	640 x 480*
HDTV720p	60	1280 x 720*
HDTV1080i	50	1920 x 1080*
HDTV1080i	60	1920 x 1080*

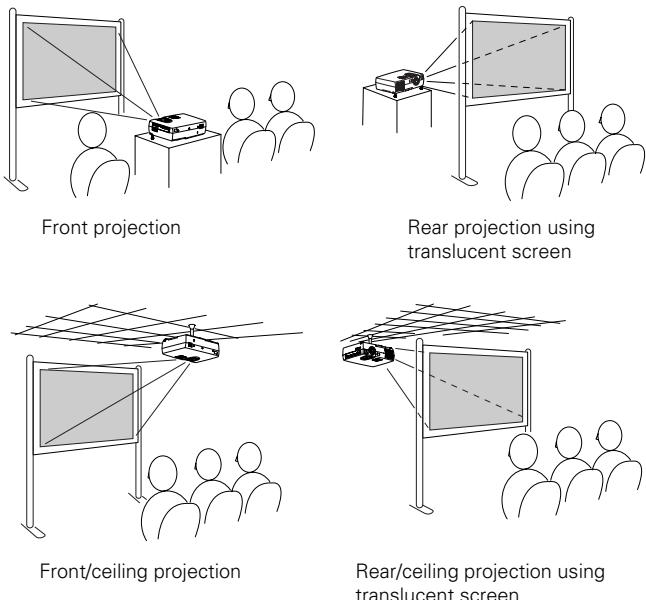
Mode	Refresh Rate (Hz)	Resolution
NTSC	60	—
NTSC 4:3	60	—
PAL	50	—
M-PAL	60	—
N-PAL	50	—
PAL-60	60	—
SECAM	50	—

*The image is resized using EPSON's SizeWise™ Technology.

Projector Placement

The EPSON PowerLite 52c supports both front and rear projection. You can also suspend the projector from the ceiling using the optional ceiling mount (see page 9).

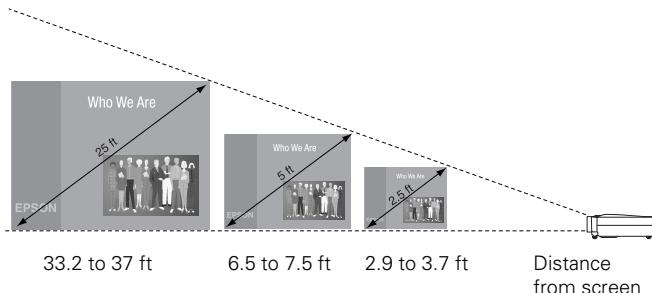
Note: Contact your dealer for help if you want to mount the projector on the ceiling.



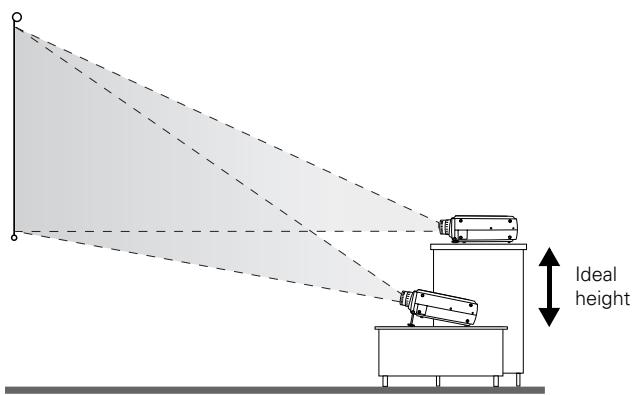
Follow these guidelines when positioning the projector:

- Place the projector on a sturdy, level surface, between 3 and 37 feet from the screen.
- Make sure there is plenty of space for ventilation around and under the projector.
- Make sure the projector is within 6 feet of a grounded electrical outlet or extension cord and within 5 feet of your computer and/or video source.
- Place the projector directly in front of the center of the screen, facing it toward the screen squarely. Otherwise, your image will not be square.

Use the figure below as a guideline to help you determine how far from the screen to place the projector. Image size generally increases with distance, but may vary depending on how you position the lens ring and whether you have adjusted the image size with other settings.



If you place the projector below the level of the screen, you'll have to tilt it up by extending the feet. Tilting the projector upward causes the image to lose its rectangular shape, but you can correct the distortion by pressing the Keystone button as described on page 5.



If you place the projector level with the bottom of the screen, the image will be rectangular and you won't have to adjust it. If you place the projector higher than the bottom of the screen, the image will still be rectangular, but you won't be able to fill the whole screen with the image.

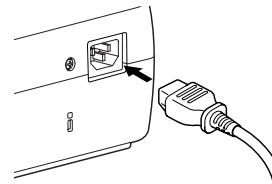
Starting Up the Projector

Make sure your projector and other equipment are set up and connected correctly. Then turn on your projector, as described below, followed by any equipment you've connected to it. You can turn on your computer and video equipment in any order, but if you have both a computer and video source connected, you may have to press the Source button on top of the projector to switch to your video source (see page 4).

Turning On the Projector

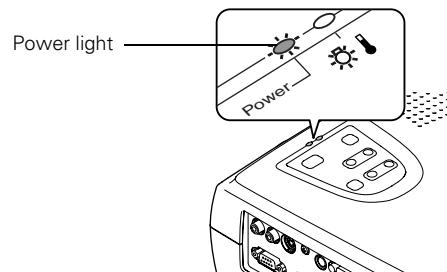
Follow these steps to plug in and turn on the projector:

1. Connect one end of the power cord to the projector's power inlet.

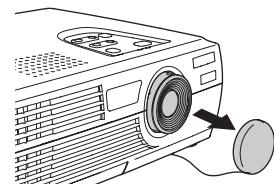


2. Connect the other end to a grounded electrical outlet.

The power light on top of the projector turns orange, indicating that the projector is receiving power but not yet turned on.

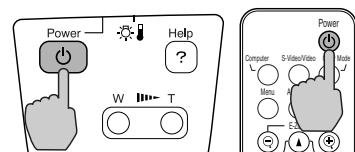


3. Remove the lens cap.



Caution: Do not use the projector with the lens cap in place. The heat generated by the lens can damage the cap.

4. Press the red Power button on top of the projector or on the remote control.



The power light flashes green as the projector warms up, and the projection lamp comes on in about 30 seconds. Then the power light stays green.

Warning: Never look into the lens when the lamp is on. This can damage your eyes, and is especially dangerous for children.

5. Do one of the following:

- If you're using a computer, turn it on or restart it. In a few moments, you should see your computer display projected. (Windows® only: If you see a message saying that it has found a plug-and-play monitor, click Cancel.)
- If you're projecting from a video source, turn it on. Press the Source button on top of the projector to switch to your video source. Then press the Play button on your DVD player or other device.

If a projected image fails to appear, see the next section for help.

What To Do If You See a Blank Screen

If you see a blank screen or a blue screen with the message No Signal, try the following:

- Make sure the cables are connected correctly.
- Make sure the power light is green and not flashing and the lens cover is off.
- Press the Source button on top of the projector to select the correct source. (Allow a few seconds for the projector to sync up after pressing the button.)
- Try restarting your computer.
- The projector may be in sleep mode. If the power light is orange, press the  Power button again.
- Press the A/V Mute button to make sure the picture has not been turned off temporarily.
- The attached computer may be in sleep mode or displaying a black screen saver. Try pressing a key on the computer.

If you're using a PC laptop:

- Hold down the Fn key and press the function key that lets you display on an external monitor. It may have an icon such as  or it may be labelled CRT/LCD. Allow a few seconds for the projector to sync up after pressing it. Check your laptop's manual or online help for details.

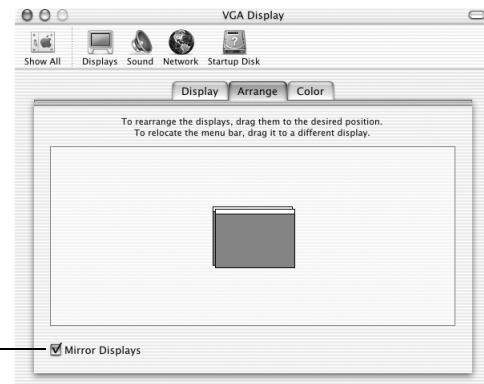
On most systems, the  or CRT/LCD key lets you toggle between the LCD screen and the projector, or display on both at the same time.

- Depending on your computer's video card, you might need to use the Display utility in the Control Panel to make sure that both the LCD screen and external monitor port are enabled. See your computer's documentation or online help for details.

If you're using a Macintosh® laptop with OS X:

You may need to set up your system to display on the projector screen as well as the LCD screen. Follow these steps:

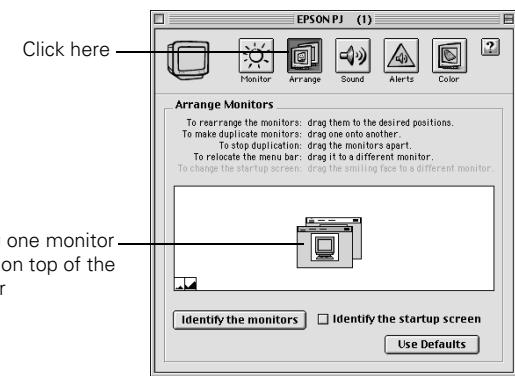
1. From the Apple menu, select System Preferences, then click Displays.
2. Select the VGA Display dialog box, click the Arrange or Arrangement tab, and make sure Mirror Displays is checked.



If you're using a Macintosh laptop with OS 9.x:

You may need to set up your system to display on the projector screen as well as the LCD screen. Follow these steps:

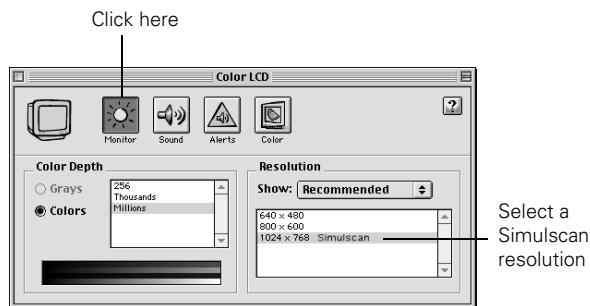
1. From the Apple menu, select Control Panels, then click Monitors and Sound.
2. Click the Arrange icon.



3. Drag one monitor icon on top of the other.

If the Arrange option isn't available, you may need to select one of the Simulscan resolution settings:

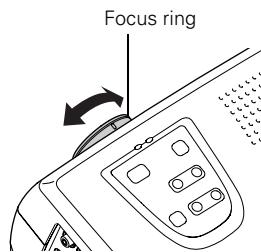
1. Click the Monitor icon if necessary.



2. Select a Simulscan resolution as shown. (Allow a few seconds for the projector to sync up after making the selection.)

Focusing and Zooming Your Image

Rotate the focus ring to sharpen the image.

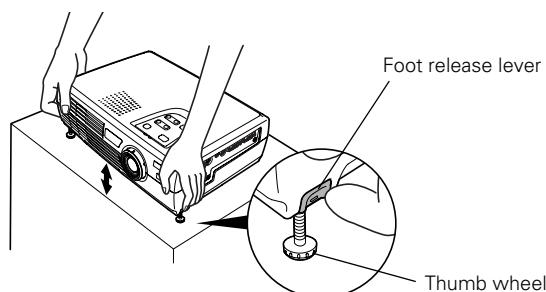


You can also change the image size by moving the projector closer to or farther away from the screen. You can use the E-Zoom button on the remote control to zoom in on a portion of the image.

Adjusting the Height of Your Image

If the image is too low, you can raise it by extending the projector's feet.

1. Stand behind the projector. Pull up the blue foot release levers and lift the front of the projector. This unlocks the feet.



Caution: Do not hold the projector by the lens; this can damage it.

2. Once the image is positioned where you want it, release the levers to lock the feet in position.
3. To fine-tune the height of the image, rotate the thumb wheels attached to the projector's feet.

If the image is no longer rectangular after raising it, see the next section.

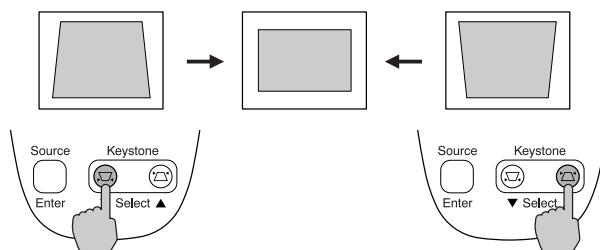
Adjusting the Image Shape

If the projected image isn't square or has a "keystone" shape, do one or more of the following:

- If your image looks like or , you've placed the projector off to one side of the screen, at an angle. Move it directly in front of the center of the screen, facing the screen squarely.

- If your image looks like or , you need to adjust the keystone correction value:

Press the or side of the Keystone button on the projector to correct the shape of the image. After correction, your image will be slightly smaller.



You can also perform electronic keystone correction using the projector's Setting menu.

Shutting Down the Projector

When you've finished using the projector, follow the recommended procedure to shut it down. This extends the life of the lamp and protects the projector from possible overheating.

Note: When the projector has not received any input signals for 30 minutes, it automatically turns off the projector lamp and enters "sleep mode." This conserves electricity, cools the projector, and extends the life of the lamp. If you are done using the projector, unplug the power cord. If you want to start projecting again, press the Power button.

1. If you're using a computer, shut it down first.

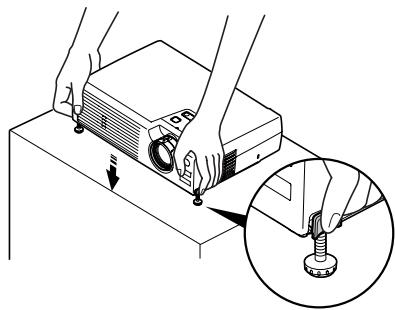
2. To turn off the projector, press the red Power button on the projector or remote control. You see a confirmation message. (If you don't want to turn it off, press any other button.)
3. Press the Power button again. The power light flashes orange for about 45 seconds as the projector cools down. When the projector has cooled, the orange light stays on and the exhaust fan shuts off.

If you want to turn the projector on again, wait until the orange light stops flashing. Then press the Power button.

4. Replace the lens cap and unplug the power cord.

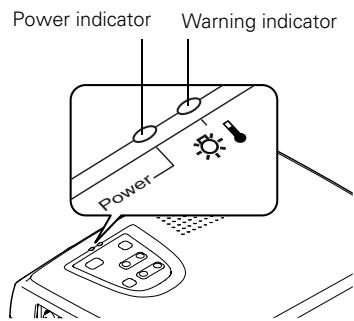
Caution: To avoid damaging the projector or lamp, never unplug the power cord when the power light is green or flashing orange.

5. Retract the front feet as shown.



6. If you're using a VCR or other video source, turn it off after you turn off the projector.
7. Disconnect all equipment, and store the projector in the soft case that came with it or in a protective case.

Projector Status Lights



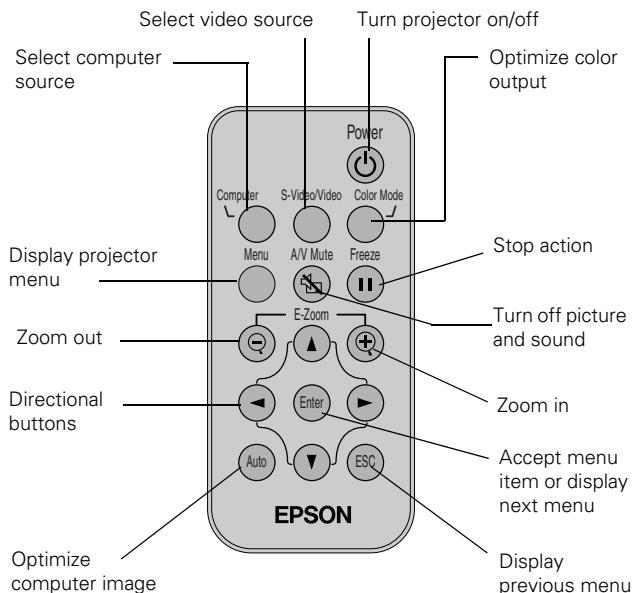
The lights on top of the projector indicate the projector's status and let you know when a problem occurs.

If the projector is not working correctly, first turn it off and unplug it. Then plug the power cord back in and turn on the projector. If this does not solve the problem, check the status lights on top of the projector and try the solutions below.

Power light	Warning light	Status	Description and action
Green	Off	Operating	The projector is operating normally.
Flashing green	Off	Warming up	The projector is warming up. Wait for the image to appear.
Green	Flashing orange	Lamp warning	The lamp is almost burned out. This is a good time to replace it. See page 8.
Orange	Off	Sleep mode	The projector is in sleep mode. You can unplug it or press the  Power button to turn it on.
Flashing orange	Off	Cooling down	The projector is cooling down. Wait for the light to become solid before unplugging it.
Flashing orange	Flashing orange (quickly)	High temperature warning	The projector is too hot. Make sure the room temperature is not above 95 °F and there is plenty of space around and under the projector for ventilation. Clean the air filter, if necessary. See page 8.
Flashing red	Flashing red (quickly)	Lamp failure	The lamp is burned out. Replace it as described on page 8.
Flashing red	Flashing red	Internal error	There is an internal error in the projector. Turn the projector off and unplug it. Contact EPSON for help.
Red	Flashing red	Fan error/ Temperature sensor error/ Lamp error	There is a problem with the cooling fan, temperature sensor, or lamp. Turn off the projector and unplug it. Contact EPSON for help.
Off	Red	Overheating	The projector has overheated and turned itself off. Let it cool for a few minutes, then turn it back on. Make sure there is plenty of space around and under the projector for ventilation. If it continues to overheat, change the air filter. See page 8.

Using the Remote Control

The remote control lets you access your projector's features from anywhere in the room (up to 20 feet away). You can use it to turn the projector on and off, zoom the image, and highlight your presentation, for example.



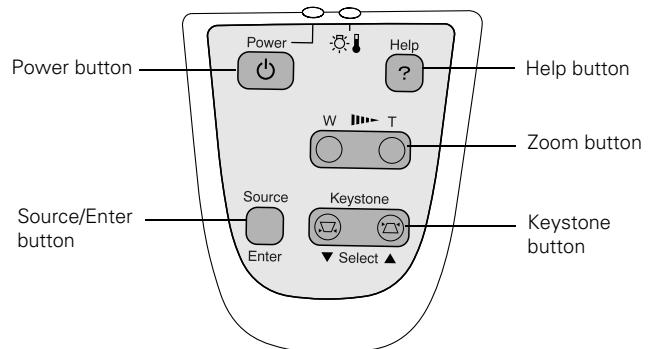
To use the remote control, stand within 20 feet of the projector and point the remote control either at the front or back of the projector or at the screen (the projector's front sensor can detect signals bounced off the screen). Press the button for any of the following functions:

Button	Function
Power	Starts or stops the projector.
Color Mode	Optimizes color output.
Freeze	Keeps the current computer or video image on the screen.
A/V Mute	Turns off the audio and video, displaying the black, blue, or user logo background. Press again to turn it back on.
E-Zoom	Enlarges or reduces the image size. Press the + button repeatedly to enlarge the image up to four times in 24 steps, or press and hold the button to zoom in to the size you want. Press the - button repeatedly, or press and hold to zoom all the way out. You can also press the ESC button to return to the original size.
Enter (pointer button)	Use the Enter button to navigate in menus or to use the remote as a mouse pointer when the projector is connected to a computer with the mouse cable. The Enter button acts as a mouse left-click.

Button	Function
Esc	Stops the current function. Pressing Esc while viewing a menu displays the previous menu. When the image source is Computer, the Esc button acts as a mouse right-click.
Menu	Displays or hides the menu.
Computer	Switches to Computer image.
S-Video/Video	Switches to S-video image or to standard composite video source.
Auto	Optimizes the computer image.
Directional buttons	Use the arrow buttons to navigate the menus or, if you're using the E-Zoom function, to scroll the image.

Note: The projector might not respond to remote control commands in these conditions: batteries are weak; ambient light is too bright; a certain type of fluorescent light is present; a strong light source (such as direct sunlight) shines into the infrared receiver; or other equipment emitting infrared energy is present (such as a radiant room heater). Correct these conditions to use the remote control.

Using the Projector's Buttons



Use the projector's buttons as follows:

Button	Function
Power	Starts or stops projection.
Help	Displays the online help menu.
Source/Enter	Switches between Computer, Video, and S-Video sources. Selects a menu option when the Help menu is displayed.
Keystone/Select	Adjusts a trapezoid distorted image to normal, correction up to a $\pm 15^\circ$ tilt. When pressed while a Help menu is displayed, it scrolls through options.
Zoom	Adjusts the size of the projected image. Press the W side to increase image size, and the T side to decrease it.

Cleaning the Lens

Clean the lens whenever you notice dirt or dust on the surface.

- Use a canister of compressed air to remove dust.
- To remove dirt or smears on the lens, use lens-cleaning paper. If necessary, moisten a soft cloth with lens cleaner and gently wipe the lens surface.

Cleaning the Projector Case

Before you clean the case, turn off the projector and unplug the power cord.

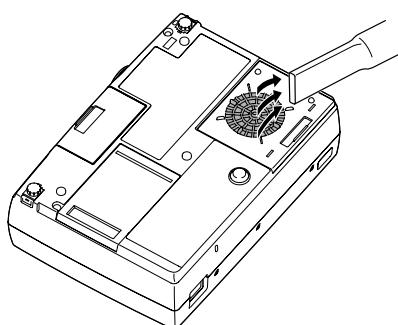
- To remove dirt or dust, wipe the case with a soft, dry, lint-free cloth.
- To remove stubborn dirt or stains, moisten a soft cloth with water and a neutral detergent. Then wipe the case.

Caution: Do not use wax, alcohol, benzene, thinner, or other chemical detergents. These can damage the case.

Cleaning and Replacing the Air Filter

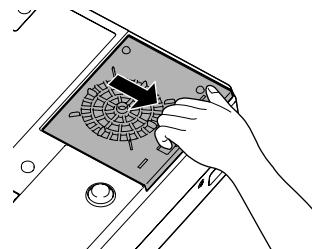
Clean the air filter on the bottom of the projector after every 100 hours of use. If it is not cleaned periodically, it can become clogged with dust, preventing proper ventilation. This can cause overheating and damage the projector.

1. Turn off the projector, allow it to cool down, and unplug the power cord.
2. Place the projector as shown below.
3. To clean the filter, EPSON recommends using a small vacuum cleaner designed for computers and other office equipment. If you don't have one, gently clean the filter using a very soft brush (such as an artist's camel-hair brush).



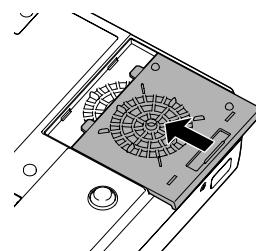
If the dirt is difficult to remove or if the filter is torn, replace it. Contact your dealer or EPSON to obtain a new one.

4. To replace the filter, use the tab to slide the filter off the projector.



Note: When you get a replacement lamp for your projector, a new air filter is included. You should replace the filter when you replace the lamp.

5. To install the new filter, slide it onto the projector, making sure to insert the tabs into the slots, until it clicks in place.



Replacing the Lamp

The projection lamp typically lasts for about 1500 hours of use. It is time to replace the lamp when:

- The projection image gets darker or starts to deteriorate.
- The warning light  is red, flashing red, or flashing orange.
- The message LAMP REPLACE appears on the screen when the lamp comes on (after about 1400 hours of use). To maintain projector brightness and image quality, replace the lamp as soon as possible.

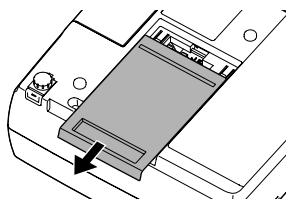
Contact your dealer or EPSON for a replacement lamp. Request part number V13H010L1D.

Follow these steps to replace the lamp:

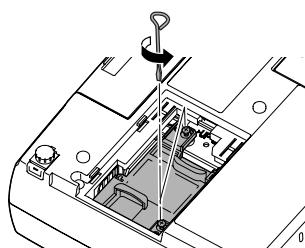
1. Turn off the projector, wait for the cool down period to end (when the power light stops flashing and remains orange), then unplug the power cord.
2. If the projector has been on, let it cool down for at least half an hour after you unplug it.

Warning: Let the lamp cool before replacing it. If the lamp breaks, handle the shards carefully to avoid injury.

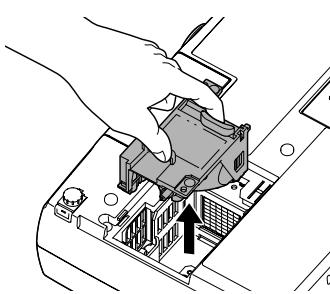
3. Turn the projector upside-down to access the lamp compartment.
4. Use the tab to slide the lamp cover off the projector.



5. Use a screwdriver to loosen the two screws holding the lamp in place. (You can't remove these screws.)

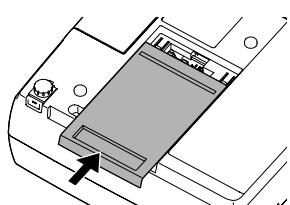


6. Hold the lamp by the tabs (as shown below) and pull it straight out.



Caution: Do not touch the glass portion of the lamp assembly. Touching the glass could result in premature lamp failure.

7. Gently insert the new lamp.
8. Once the lamp is fully inserted, tighten its screws.
9. Slide the lamp cover back on until it clicks into place.



Optional Accessories

EPSON provides the following optional accessories:

Product	Product number
Replacement lamp and air filter	V13H010L1D
Customized carrying cases: Samsonite® wheeled soft case ATA Molded Hardcase Samsonite notebook/projector soft shoulder bag	ELPKS24 ELPKS44 ELPKS43
Distribution amplifier	ELPDA01
Component video cable (VGA to component video)	ELPKC19
Macintosh adapter set (includes monitor adapter and desktop adapter)	ELPAP01
Projection screens: 50-inch portable screen 60-inch portable popup screen 80-inch portable popup screen	ELPSC06 ELPSC07 ELPSC08
Presentation cameras: High resolution document imager Motion presentation camera High resolution document camera	ELPDC02 DLPDC03 V12H064020
Installation accessories: Ceiling mount Suspension adapter False ceiling plate	ELPMB38 ELPMBAPL ELPMBFCP
Kensington® security lock	ELPSL01

You can purchase these accessories from your dealer, or by calling EPSON at (800) 873-7766, or by visiting the EPSON StoreSM at www.epsonstore.com (U.S. sales only). In Canada, please call (800) 463-7766 for dealer referral.

Related Documentation

CPD-15173	<i>EPSON PowerLite 52c User's Guide</i>
CPD-15174	<i>EPSON PowerLite 52c Quick Setup sheet</i>
Parts Price List	PL-EMP52C